

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Unit Two Practice Test

**Part One: Writing:** Please answer each question using complete sentences and algebraic terms. Be sure to echo the prompt.

1. Give an example of two like terms and explain HOW they are like terms.

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2. What two operations does the distributive property combine in this example? Explain.  
Example:  $-5(2x + 6)$

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3. Are the terms  $5x^2y$  and  $-10xy^2$  like terms? Explain your reasoning.

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**Part Two:** Simplifying Expressions: Simplify each expression as completely as possible. BOX your final answers.

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|-------------------------|-----------------------------|-------------------------|
| 4. $10 - 3 + 9 - 6$     | 5. $4(2x + 3)$              | 6. $-(y - 8)$           |
| 7. $-12(2f + 1)$        | 8. $8(2h + 1) + 9h$         | 9. $7x + 3x$            |
| 10. $7x - 3x$           | 11. $-7x - 3x$              | 12. $-7x - (-3x)$       |
| 13. $4(2w - 3) - w + 8$ | 14. $a + b + a + b + a + b$ | 15. $-5y - 10 + 3y - 6$ |

**Part Three: Matching:** Please write the CAPITAL LETTER of the expression that matches each phrase.

- A.  $-x + 3$       B.  $2(x - 3)$       C.  $2(x + 3)$       D.  $x + 3$       E.  $x/3$   
F.  $3(x - 2)$       G.  $3x$       H.  $2x + 3$       I.  $x - 3$       J.  $-3 - x$

15. \_\_\_\_\_ the product of three and x  
16. \_\_\_\_\_ three less than x  
17. \_\_\_\_\_ negative x increased by three  
18. \_\_\_\_\_ the quotient of x and three  
19. \_\_\_\_\_ three multiplied by the difference of x and two  
20. \_\_\_\_\_ two times the difference of x and three  
21. \_\_\_\_\_ three more than x  
22. \_\_\_\_\_ three more than twice x  
23. \_\_\_\_\_ two times the sum of x and three  
24. \_\_\_\_\_ negative three subtracted by x

**Part Four: Word Problems:** Please answer each part of the word problems below.

25. There are "x" number of xylophones in the music store. There are three times as many guitars as xylophones. Write an expression for the number of guitars in the store, using x.

\_\_\_\_\_

26. Sabria has "j" number of jeans in her closet. She has two more than four times as many shirts as jeans. Write an expression for the number of shirts Sabria has, using "j."

\_\_\_\_\_

27. De'Jah is at the National Zoo and she sees a certain number of lions.

- a. Define a variable to represent the number of lions De'Jah sees. \_\_\_\_\_  
b. De'Jah sees five more tigers than lions. Write an expression for the number of tigers De'Jah sees, using your variable from part a. \_\_\_\_\_

- c. De'Jah sees twice as many flamingoes as tigers. Write an expression for the number of flamingoes De'Jah sees, using your variable from part a. \_\_\_\_\_
- d. Write AND SIMPLIFY an expression for the total number of lions, tigers and flamingoes combined that De'Jah sees. BOX your final answer.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Unit 2 Practice Test (Continued)

### Part Five: Mental Math via the Distributive Property

28.  $6(3,009) = 6(3,000 + 9) = 6(\underline{\hspace{2cm}}) + 6(\underline{\hspace{1cm}}) = \underline{\hspace{2cm}} +$   
 $\underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

29.  $5(451) = 5(400 + 50 + 1) = 5(\underline{\hspace{2cm}}) + 5(\underline{\hspace{2cm}}) + 5(\underline{\hspace{2cm}}) =$   
 $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

30. How does the distributive property help simplify difficult multiplication problems? Explain using complete sentences and algebraic terms. Be sure to echo the prompt.

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